Application No. 10/675,264

IN THE CLAIMS:

Cancel claims 1-5 and 8-16.

6. The method of claim ~~5~~ 17, wherein the ~~dechucking~~ gas consists essentially of O_2.

7. The method of claim ~~5~~ 17, wherein said metal-containing layer comprises Aluminum.

ADD the following new claims

17. A method of removing polymer residue from a semiconductor substrate or from surfaces of an etch chamber, which residue results from etching portions of a metal layer comprising aluminum or copper from the semiconductor substrate, the method comprising the steps of:

placing the substrate in the etch chamber;

etching the metal layer by providing an etchant gas in the chamber, the gas comprising Cl_2, BCl_3 or CHF_3 or a mixture thereof, said etching resulting in formation of the polymer residue; and

providing a gas in the chamber, comprising O_2, O, NO or NO_2 or a mixture thereof.

18. The method of claim 17 wherein the step of providing the gas comprising O_2, O, NO or NO_2 in the chamber cleans the polymer residue from the substrate.

19. The method of claim 17 wherein the step of providing the gas comprising O_2, O, NO or NO_2 in the chamber includes formation of an oxygen plasma to clean the polymer residue from the substrate.

20. The method of claim 17 wherein the step of providing the gas comprising O_2, O, NO or NO_2 in the chamber is performed as part of a dechucking operation.

21. The method of claim 17 wherein the step of providing a gas in the chamber is performed by providing a mixture comprising two or more species taken from the group comprising O_2, O, NO and NO_2.

22. The method of claim 17 wherein:

the step of placing the substrate in the etch chamber includes placing the substrate in a chuck; and

the step of providing the gas in the chamber includes dechucking the substrate with the gas taken from the group consisting of O_2, O, NO and NO_2.

23. A method of removing polymer residue from a semiconductor substrate or from surfaces of an etch chamber, which residue results from etching portions of a metal layer comprising aluminum or copper from the semiconductor substrate, the method comprising the steps of:

placing the substrate in the etch chamber;

etching the metal layer with an energized form of Cl_2 or BCl_3 or a mixture thereof, said etching resulting in formation of the polymer residue; and

providing a gas in the chamber, comprising O_2, O, NO or NO_2 or a mixture thereof.